

Remarks

Applicants and their undersigned attorney have carefully reviewed the Office Action of March 6, 2007 in the above-identified patent application, together with the prior art references cited and relied on by the Examiner in the rejection of the claims. The present application, as currently amended, is not anticipated by, and is not obvious in light of, the cited references art. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The build-up of peroxides in a fuel is thought to be detrimental for various reasons. It is therefore desired that peroxides in fuels be reduced. It is known that conventional fuels, which are high in sulfur, contain at least some sulfur compounds that act as peroxide scavengers and/or decomposers.

Modern fuels are produced with low or ultra low levels of sulfur. The potential increase in peroxides due to the use of these low sulfur fuels is detrimental to fuel systems because peroxides are known to degrade fuel system elastomers. High levels of peroxides would, therefore, ultimately lead to the failure of seals, gaskets, and hoses in a fuel system that uses such fuels. Increased peroxide levels can also lead to reduced fuel stability, color durability, and increased fuel sediments.

It is conventionally understood that combustion improvers like organic nitrate combustion improvers affect peroxide formation. It has been observed that combustion improvers promote or increase the formation of peroxides at certain temperatures.

As disclosed by only the subject application, it has been discovered that at temperatures below about 70 degrees Celsius, there is actually an unexpected reduction in the amount or the formation rate of peroxides when an organic nitrate combustion improver is combined with an ultra-low sulfur fuel. Yet, middle distillate fuels are often stored for days, weeks or even months

before the fuel is used. While in storage or during transport, the fuel's temperature may exceed approximately 70 degrees Celsius. As currently amended, the subject application requires that the temperature of a middle distillate fuel that is combined with an organic nitrate combustion improver be maintained at a temperature less than about 70 degrees Celsius. In Figure 2 of the application, it is illustrated that fuels containing an organic nitrate combustion improver (e.g., 2-EHN) each demonstrate a longer time to reach a detrimental level of peroxides when fuel temperatures are below approximately 70 degrees Celsius.

Currently, all of the currently pending claims, claims 1-8, stand rejected under 35 U.S.C. § 102 in view of Applicant's commonly assigned reference to Cunningham (EP0457589). Claims 1-7 are also rejected under the same section in view of Applicant's commonly assigned reference to Henley (EP1321504). It is recognized that Cunningham and Henley do not teach that a nitrate improver reduces the amount of peroxides. However, the Office Action rejects the subject application as being inherently disclosed by each reference.

The cited references are commonly assigned to the assignee of the subject application. However, Applicant does not believe that an affidavit in accordance with 37 CFR 1.132 is necessary at this time because the cited references do not disclose each and every element of the currently amended claims, and therefore, cannot be operable as 35 U.S.C. § 102 references. In addition, the subject independent claim is not inherently taught by the cited references because, as demonstrated in the application, nitrate improvers increase peroxide in some conditions. Reconsideration of the claims as currently amended is respectfully requested.

Claim 8 is rejected under 35 U.S.C. § 103(a) in view of Henley and Cunningham in combination. The Office action states that Henley discloses a fuel comprising about 5 ppm of sulfur and about 100-10,000 ppm of added organic nitrate combustion improver. While neither reference specifically discloses that adding the nitrate improver into the fuel would reduce the

amount of peroxides, the Office Action concludes that "it would be expected that peroxides would reduce in the fuel as claimed."

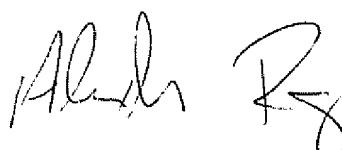
The subject application specifically teaches that combustion improvers promote or increase the formation of peroxides at certain temperatures. Therefore, there is not an expectation that peroxides would necessarily reduce in the fuel as claimed. At temperatures below about 70 degrees Celsius, there is actually an unexpected reduction in the amount or the formation rate of peroxides when an organic nitrate combustion improver is combined with an ultra-low sulfur fuel. This process step is now captured in the claims as amended and is not taught, suggested, or otherwise rendered obvious by Applicant's earlier, commonly-owned patent references.

For any one or more of the foregoing reasons, and further in view of the foregoing amendments, Applicant submits that the present application is now in condition for allowance. All rejections are traversed. Favorable action is requested hereon.

It is believed that there are no fees associated with this filing. However, in the event that this is incorrect, the Commissioner is hereby authorized to charge any deficiencies in fees or credit any overpayment associated with this communication to Deposit Account No. 50-2127.

Respectfully Submitted,

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Date


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